



news

Edition
English

14



DKT 2022

MAP. AUTOCELL
THE ALL-IN-ONE
CONTROL UNIT

RAPID+ 300 RC22
NEW, FASTER & MORE
ENERGY-EFFICIENT

ROBOTICS &
COLDRUNNER SYSTEMS
MADE BY MAPLAN



THE KEY TO THE FUTURE

MAPLAN 360° turnkey solutions





Dear readers,

A global pandemic, military conflicts, the disruption of supply chains - the news has been dominated by negative topics in the last few months. Despite these issues, last year was very positive for MAPLAN and we were able to achieve the highest order intake in the company's history. The new business areas developed during the lockdowns, such as MAPLAN Cold Runners and MAPLAN Automation Technology, were well received by the market.

However, last year the rules of the game in the procurement market changed significantly for all of us: certain components were no longer available, delivery times increased exorbitantly. In addition, many products and raw materials became extremely expensive - sometimes several times over within a very short period of time.

Despite all this, the MAPLAN team is making every effort to solve this challenge to the satisfaction of our customers.

Nevertheless, a very positive occasion should not go unmentioned in these challenging times: We celebrate our 50th anniversary this year! MAPLAN has constantly developed since 1972 and is now a very successful international player.

Moreover, we are looking forward to finally welcome you personally at trade fairs again and to chat in a relaxed atmosphere.

#togetherwemaplan

In the meantime we remain with cordial greetings,

CEO
 Wolfgang Meyer

Owner
 Philippe Soulier

IMPRINT

PUBLISHER
 MAPLAN GmbH, MAPLAN Straße 1
 AF 75-42 Kottlingbrunn

EDITOR
 Martina Kruber, Wolfgang Meyer, Gerald Kemper

LAYOUT
 Mathias Schwarz

office@maplan.at, FN 63369s, UID: ATU9665306

MAPLAN ONE STOP SHOP



Rubber processing equipment FROM A SINGLE SOURCE

We can't wait to talk to our customers face to face again! The preparations for our trade show booth in Nuremberg are already in full swing, which this year will be styled to celebrate "50 years of MAPLAN", among other things. At the upcoming DKT, MAPLAN's trade show presence will focus on modularly structured, user-friendly 360° complete solutions and their individual components.

The MAP.autocell concept will make its trade show premiere at the location Hall 9 Booth 201. Its key innovation is the injection moulding machine and automation cell "one-for-all controls", which offer unprecedented convenience as well as a high level of user-friendliness when integrating automation components. Further show highlights include the new, vertical C-frame EASY' machine and the re-design of the horizontal RAPID' machine.

New in the MAPLAN portfolio is a whole range of cold runner systems, as well as stand-alone valve gate control units, which can be used independently of the machine make. MAP.mate robot systems specifically adapted to production complete the 360° portfolio.

Due to the Covid-19 pandemic, four years have already passed since the last DKT. Four years in which the trend towards automation solutions in the injection moulding of rubber molded parts or rubber composite articles has intensified. Today automation is a must in order to maintain 24/7 production and not depend on the difficult personnel situation. MAPLAN presents a wide range of practical automation so-

lutions that can be modularly adapted to the customer's needs: The machine is kept as standard as possible. In addition, machine-related functional extensions are covered by standard options. If required, machining tasks to be automated are combined with supplementary accessories in an individually configurable automation cell (MAP.autocell) to enable semi- or fully-automatic production. The potential of a MAP.autocell will be shown at the DKT using a demo cell.



MAPLAN at the DKT 2018



The new MAP.mate 6-axis robot in use in a fully automatic MAP.autocell

360° TURNKEY SYSTEMS BY MAPLAN EVERYTHING FROM A SINGLE SOURCE

Upon request, MAPLAN will in the future take care of the entire project planning process for the client when it comes to MAP.autocell orders: Project planning, cell layout, injection moulding machine(s), cold runner, molds, robots and all automation components as well as the safety area will be perfectly coordinated. The customer benefits from one contact person for all concerns and components. Projects with certified MAPLAN premium technology partners also reduce engineering costs, shorten the implementation phase and guarantee smooth functionality.

THE ONE-FOR-ALL MACHINE & AUTOMATION CONTROL CENTER:

EVERYTHING FULLY INTEGRATED IN THE MAP.COMMANDER CC (CELL CONTROL)

When it comes to system control MAPLAN relies on a "same controls concept" with the same hardware and the same look & feel for the machine and for automation components of the production cell. This means that the machine operator is always presented an overview of all processes and can operate both controls very easily thanks to the familiar user interface. A color code makes it easy for the machine operator to distinguish between the machine and the automation controls. The user interface of the cell controls (MAP.commander CC) can be switched over to the machine terminal, making it possible to conveniently operate both system components from one spot. For example, robots can be directly controlled, synchronized with the injection moulding machine and monitored. The status of the automation system can be called up at any time and the display of alarms enables simple and rapid troubleshooting. Interfaces to third-party controls are largely eliminated. This makes interface problems a thing of the past. The capacity of the MAP.autocell is such that it can combine not only one, but up to six MAPLAN machines including all peripheral devices and automation components (or also third-party machines with the corresponding interface) into one production cell. The MAP.commander CC is by definition a multi functional control system that can be neatly adapted to customer-specific requirements.

MAP.commander C6 machine control



MAP.commander CC automation control



The main advantage of the "same controls concept" for injection moulding machine and automation cell is the uniform operating logic and the ability to switch user interfaces on each screen of the production cell.



Upon request, **TURN-KEY-READY MAPLAN 360° INJECTION MOULDING SYSTEMS** include:

- Injection moulding machine
- MAP.mate robot systems
- Handling systems & conveyor belts
- MAP.crb cold runner technology
- Brushing and demoulding systems
- Injection moulding tools
- Testing equipment & quality control
- Individual automation components

**NEW, FAST & ENERGY-EFFICIENT
HORIZONTAL RAPID+ 300
RC22 INJECTION MACHINE**

With the RAPID+ 300 RC22, the first model of the revised horizontal machine series will make its trade show premiere. During the redesign, our engineers focused on increasing the production speed of free-falling molded parts such as O-rings, as well as on largely maintenance-free operation, precision and high long-term quality. This goal was achieved, among other things, by using a new clamping unit. The tie-bar-guided plate guide of the previous version was changed to a lubrication-free plate guide via linear bearings on the base frame. The advantages for the user are that the product area is completely lubricant-free and plate parallelism can be easily adjusted. In addition, the rigidity values for this clamping unit have been significantly improved and the tie bar distance has been increased by 25 mm.

Even more significant is the progress achieved in terms of energy consumption and machine speed. Both are the result of the elimination of tie-bar friction and the lower friction values of the linear guide in conjunction with the fast-response servo motor main drive. All together, the pure machine dry run time is reduced by up to 20 % compared to the predecessor machine, with lower energy consumption at the same time.

As with the vertical EASY+ series, the RAPID+ also has a "one-piece base frame" that integrates all drive units and makes the machine transportable as a whole, thus eliminating lengthy assembly and adjustment times on site for this machine as well.

The new RAPID+ series is available in five sizes in the clamping force range from 2000 to 8000 kN.



Pure machine dry run time is reduced by up to 20 %, with lower energy consumption to boot.

The hallmark of the new RAPID+ 300 "RC22" horizontal machine is the new high-precision clamping unit, which offers the best conditions for reducing energy consumption and enables faster cycle times thanks to an overall lower friction level.



The EASY+ TTPE 85/50 will make its trade fair premiere at DKT 2022 and is representative of the new series of hydraulic "One Piece" C-frame machines.

**THE NEW
VERTICAL EASY+
C-FRAME MACHINE**



Representative of its new top-closing, tie-bar-less C-frame vertical machines, MAPLAN presents an EASY+ TTPE 85/50.

The series is perfectly tailored to the requirements of the assemblers of hollow and compact profiles (corner gating), but is also ideally suited for the production of small molded parts. At an attractive price/performance ratio, it is available in five clamping force versions between 200 and 1000 kN. In contrast to its predecessor, the EASY+ TTPE 85/50 on show is designed as a "one-piece unit" that combines the machine and drive units into a "forklift-compatible" transport unit. This saves installation and assembly time. The operating height is an ergonomically favorable 900 mm on all machines. In addition, the machines are significantly faster and more energy-efficient than their predecessors. Quick lift cylinders increase the speed and the proven MAP.cooldrive servo-motor drives guarantee maximum energy efficiency. The new EASY+ can be equipped with the proven MAP.fifo rubber injection units as well as with TPE versions developed in-house, which are available in two sizes with 60 and 85 cm³ as well as 130 and 170 cm³. The EASY+ machines are operated with the new MAP.commander C60, which has been intelligently integrated into the control cabinet and is adapted to the practical control of C-frame machines.

Deutsche Kautschuk-Gesellschaft e.V. presents
DKT RC 2021
June 27 - 30, 2022, Nürnberg, Germany

Visit us!
NCC West Hall 9 - Stand 201



**MODULAR ALL-ROUNDER
THE VERTICAL ERGO+ 250**

Besides its compact design, the ERGO+ 250 wows with its particularly ergonomic operating height and its generously sized hot plates.

At this year's DKT, MAPLAN will present this machine equipped with a MAP.fifo ERGO injection unit with 2l injection volume, which can be operated from the stand without additional pedestals.

For the ERGO+ 250, MAPLAN offers a very comprehensive portfolio of machine-related automation equipment, which makes our slogan "Make it easy" a reality.

The ERGO+ 250 will be presented this year with an easily accessible MAP.fifo ergo injection unit with all FIFO advantages and ergonomic in-feed height.



The ultra-slim MAP.crb cold runner system by MAPLAN - ideal to retrofit existing machines.

**IMPROVED PRODUCTION EFFICIENCY AT LOWER
MATERIAL INPUT: MAPLAN COLD RUNNER SYSTEMS**

As a consistent next step towards becoming 360° complete system supplier, MAPLAN has added a complete range of cold runner systems for injection molds to its product range. During the development many requirements were taken into consideration, such as the straight-forward retrofitting to existing machines, high injection pressures, the possibility of direct injection onto the article, as well as the suitability for frequent

compound changes (read more in the MAPLAN newsletter issue 13). In addition, new stand-alone cold runner control units are available for retrofitting, which are not only suitable for controlling the company's own valve gate cold runner systems. NVKKs from other manufacturers can also be controlled with this device without having to retrofit expensive control hydraulics or electrics on the machine side.

**MAXIMUM PRECISION AUTOMATION:
MAP.MATE ROBOTICS**

Robots ensure quality, work around the clock while optimizing production costs at the same time. In many places they currently ensure that production can continue without interruption, despite a lack of personnel. MAPLAN supplements the automation portfolio with robotic systems for every application as part of its 360° complete system supplier approach. The two MAP.mate and MAP.mate SCARA model series are not only compact and fast, but also easy to integrate into a MAPLAN production cell (Read more on page 8.).



ULTRA-FAST!

PROCESS OPTIMIZATION AT WESTLAND



Sales Manager North MAPLAN, Robert Kusch, Director Operations Moulded Articles WESTLAND, in front of the WESTLAND production plant in Otrokovice

Faster processes – and happier staff – WITH ERGONOMICS

"Rubber is not a plastic" - this is how Robert Kusch, responsible for the operative business of WESTLAND GUMMIWERKE in the area of technical moulded parts, begins our conversation in the Czech branch in Otrokovice. The plastics engineer joined WESTLAND in 2018 and realized early on that rubber is much more exciting to process than thermoplastic. He comments on the history of WESTLAND as follows: The Otrokovice plant was put into operation

27 years ago to respond to competitive pressure in the production of molded rubber parts. At that time, the German location in Melle could no longer keep up with the wage costs in the Czech Republic. The company started with 4 injection moulding machines and a handful of employees. Today, 50 injection moulding machines are run at this location by over 200 employees responsible for the production of technical molded products - exclusively for the

non-automotive sector. WESTLAND has always employed a lot of women as part of the team in Otrokovice. For this reason, an attractive, ergonomic workplace is essential, which, among other things, enables smaller people to carry out all manual operations easily and without additional aids.

BEING A MACHINE OPERATOR IS NOT ALWAYS EASY

WESTLAND had followed a uniform tool concept until the introduction of a new production philosophy. Own mechanical systems were mounted to the injection moulding machines. The single or double center plate moving systems with up to 800 mm wide and heavy plates had to be pushed and moved by hand. Only the ejection of the finished parts from the center plates was done hydraulically by 2-hand operation. The sprue spiders had to be demolded by hand from the sprue plate located in the machine. Many employees were unable to operate this machine design or found it very difficult. The laborious work process therefore had to be made easier and less strenuous. Therefore, a project was launched looking into the production department holistically: a more efficient machine concept with ergonomically optimized production was needed! Together with MAPLAN, solutions were developed which today mean that the machine operators prefer to work on a MAPLAN machine.

“ Production was automated in a cost-efficient and employee-friendly way. At the same time we were able to increase output by 30 % and markedly improve quality.

Robert Kusch, International Production Manager for molded rubber parts at WESTLAND

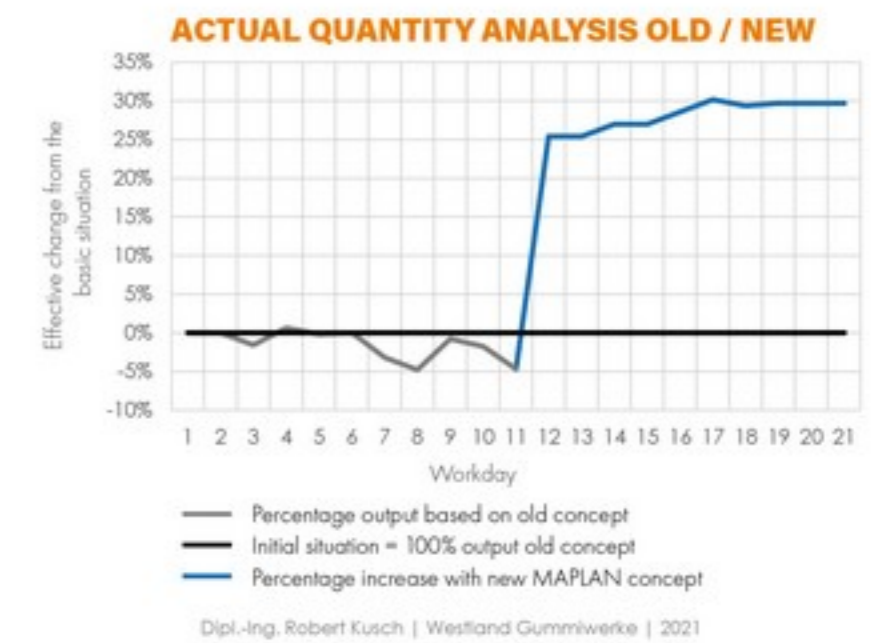
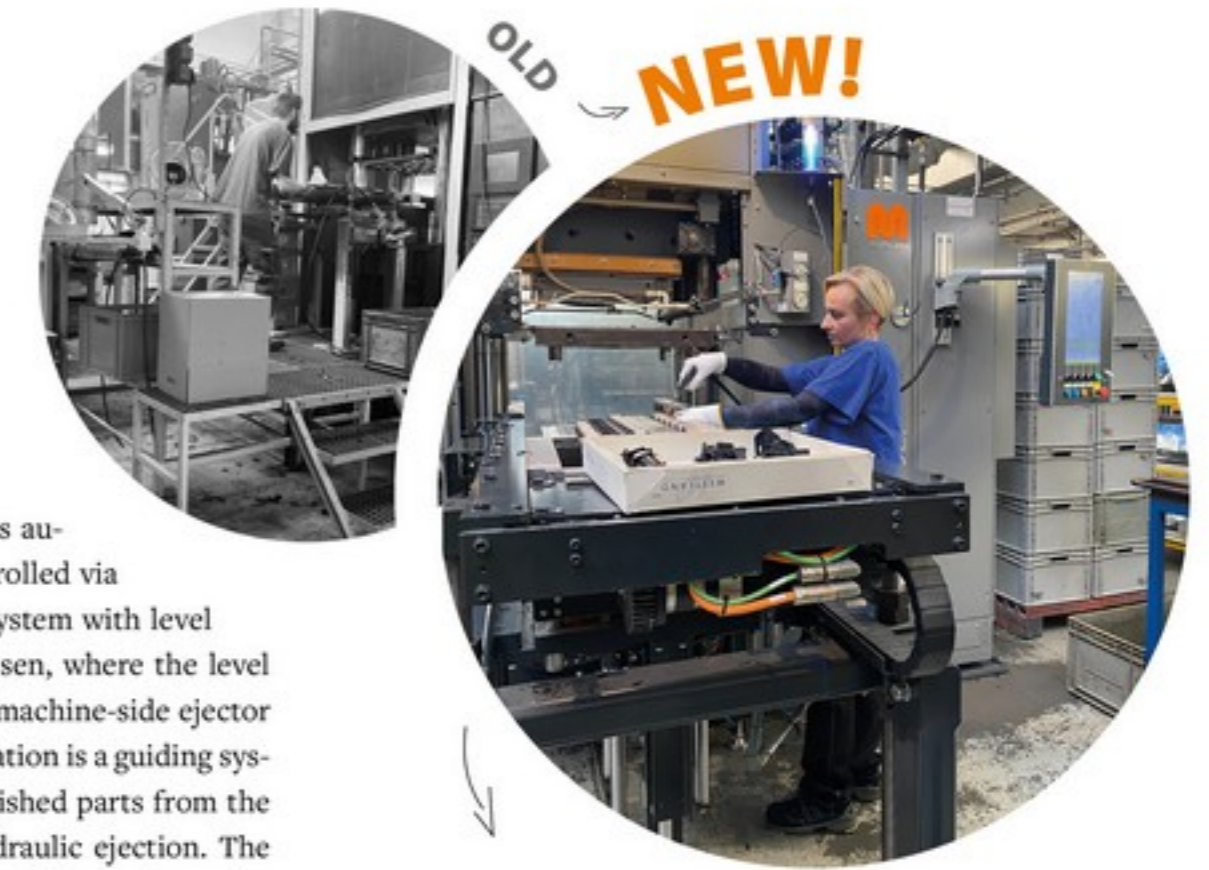


*That's what counts: Quality is the key.

Cycled deforming WITHOUT A PLATFORM

The following measures led to higher performance in more than one respect:

1. The center plate change for the two product plates was automated, the forward movement now being cycle-controlled via a shuttle system. A hydraulic center plate movement system with level change from the MAPLAN standard portfolio was chosen, where the level change of the two center plates is carried out with the machine-side ejector in the machine. Located in the machine and in the outstation is a guiding system which allows the ergonomic demoulding of the finished parts from the front at an ergonomic height after the automated, hydraulic ejection. The new production concept is easy to operate: the operating height is always the same for the operator and nothing is in their way.
 2. With the extensive adjustment possibilities of the MAP.commander C6 machine controls, it is possible for WESTLAND to use molds with two article center plates as well as molds with one product plate in a very simple way.
 3. A new sprue plate movement system located on the injection-side machine ejector has also been implemented. It is also moved hydraulically to the front for optimum ergonomic removal of the distributor spider(s). This is where the generously selected standardized ejector stroke of 400 or 600 mm from MAPLAN came into its own.
 4. The MAPLAN injection moulding machines 250t ERGO* and 460t ERGOMAX* used by WESTLAND with the same machine specification score with their particularly low operating height, which makes platforms or other climbing aids unnecessary. Even in standard configuration, the machines guarantee optimum ergonomics thanks to the sophisticated clamping unit design philosophy.
- The process is now fully automated, faster and enables cycled demoulding. This way, an increase in efficiency of up to 30 % was achieved. At the same time, the quality of the molded parts produced has been significantly improved through cycled steps with repeatable precision.



BEST POSSIBLE RESULTS WITH COOPERATION & OPEN COMMUNICATION

The specifications roughly outlined by WESTLAND were discussed with the MAPLAN engineers and checked for feasibility and improvement possibilities. The focus was on holistic optimization that would avoid waste, increase productivity, significantly improve ergonomics and simplify all process steps. Through open, mutual exchange of experience, it was possible to jointly develop the best possible solution, which actually exceeded WESTLAND's expectations. MAPLAN's modular system was used expertly in the process. In combination with this concept and the future-oriented MAP.commander C6 control system, the team at WESTLAND is already well prepared for further, future automation plans.

SUSTAINABLE, FULLY OR SEMI-AUTOMATED PRODUCTION SECURES THE FUTURE

WESTLAND has big plans - even more automation and digitization as well as the further use of the latest technologies are the topics that the team is working on together with MAPLAN. The MAP.mes digital interface currently in use already supplies data from all MAPLAN machines to the MES Hydra/MPDV system, such as cycle coun-

ters, injection and heating times. These are used to optimize performance, quality and logistics. The vision, however, is a completely paperless factory - doing away with printed test plans or production orders at the machine. In future, shop floor management will be operated via digital boards. The aim is to become as "lean" as possible - to save time, optimize the flow of information and communication and visualize figures in the best possible way.



ABOUT WESTLAND GUMMIWERKE

Headquarters: Melle/Germany - Family-owned business run by the 3rd generation
Turnover: Approx. 88 Mio. EUR (2019)
Westland Group employees: Approx. 850
Production: Cylinder production, technical moulded articles, compound production
 13 subsidiaries, 14 production sites in 10 countries
 4 business areas in the field of technical moulded products:
 Control technology, fittings, machine/plant engineering, seals

In the picture on the left: Gerald Kemper, Sales Manager North MAPLAN, Robert Kusch, Director Operations Moulded Articles WESTLAND worldwide, Vladimir Regentik, Production Manager WESTLAND Otrokovice



The management team – the second generation of AT GOMMA, the sons of the founder Bortolotti: Matteo, Production Planning/Logistics, Giulia, Finance & Administration and Michele, Commercial & Technical Manager.

BOOSTING MARKET SHARES WITH EXCEPTIONAL PARTS QUALITY

A.T. Gomma is committed to innovation and progress. This is why the Italian company located in Bergamo's "Rubber Valley" has internalized the principles of the digital revolution to become an "Industry 4.0" company.

To make this possible it launched an investment plan in 2016 aimed at making its entire production future oriented. At the core of this strategy was to replace the entire injection moulding machine fleet with machines of the latest generation by 2020. The technological update allowed the now ISO-certified company to comprehensively digitize its processes and led to many, holistic advantages - freely following the motto "higher quality, fewer difficulties" (see box top right).

An extensive market analysis of all machine manufacturers in Europe was conducted and in the end the decision was made to cooperate with MAPLAN. MAPLAN's pioneering technology, which concentrates purely on elastomer processing, was the deciding factor for AT Gomma. It was able to provide the basis for higher production quality in the company as well as the desired flexibility. The high-precision FIFO



The production of AT Gomma in Foresto Spasso/Bergamo

technology, which is new to the Italian company, and the optimum temperature distribution on the hot plates were, among many other advantages, the key to a significant increase in optimized part quality. Over the years AT Gomma invested in nine horizontal and vertical injection moulding machines in the clamping force range from 300 to 460 t, as well as in two compression presses, all machines made by MAPLAN. The oldest machine in AT Gomma's production plant was built in 2016.



AT Gomma invests in innovation – and MAPLAN

MAXIMUM QUALITY, FLEXIBILITY AND ENERGY SAVINGS

Above all, the machines' quality, flexibility and the low energy consumption led to the fact that AT Gomma is now more convinced than ever of the decision it made at that time. Large and small tools are used on the horizontal RAPID* 300 machines. The particularly large daylight, the lower mold installation height and the high closing stroke allow the use of low and tall molds, even including a cold runner.

Another bonus is the highly accurate and particularly easy-to-clean MAPLAN Original-FIFO injection unit. AT Gomma produces a variety of molded items in different colors. Before 2016, each machine was assigned to one color because switching colors was too time-consuming due to the pusher screw. This now belongs to the past - and this massively increases flexibility because compound changes, including cleaning of the FIFO injection unit, can be carried out rather easily and quickly. Changing from rubber to rubber takes less than an hour, silicone to rubber takes a little longer.

Despite now running twice as many machines, energy consumption has not increased - and this despite the fact that machines with higher tonnage are used. Saving as much energy as possible is especially important because the availability of electricity in the region is fluctuating. In addition, power prices have reached an all-time high.

"MAPLAN's sturdy machine construction, the process parameters that can be precisely set with the C600 control and the perfect temperature distribution on the hot plates have significantly increased our parts quality and led to noticeably reduced scrap rates. Today, our customers experience the difference: for half a year there has not been a single customer complaint," says Matteo, Head of Production Planning. "It goes even further: Now we even produce parts that AT Gomma couldn't offer before because the machinery at the time wasn't suitable for it."

IMPROVED CUSTOMER COMMUNICATION

In the past, AT Gomma had been a subcontractor in many cases. The new strategy aimed at changing this situation, in addition to the renewal of the machine park. After the generation change, the young managing directors and owners Michele, Giulia and Matteo also focused on increased cooperation with the end customer. "Today, the customer demands higher quality and a relationship based on partnership," explains Michele Bortolotti, commercial and technical manager of AT Gomma. The ambitious and highly qualified team supports customers in the design, development and realization of new parts every day. The flexible and modular machine technology as well as the extensive process engineering know-how of MAPLAN support AT Gomma in achieving a high-quality result at attractive prices. The range of materials to be processed is broad: NBR, HNBR, EPDM, PEROX-EPDM (non-conductive), VMQ, FVMQ, FKM, FFKM, CR and many

"MAPLAN enables us to avoid production problems and make our process more flexible and streamlined, so that delivery continuity is always guaranteed."

Matteo Bortolotti, Head of Production Planning & Logistics



A horizontal RAPID* in operation at AT Gomma.



ABOUT A.T. GOMMA S.R.L. GUARNIZIONI INDUSTRIALI

Foresto Spasso, Bergamo, Italy | Turnover 8 millions, 35 employees
Industries: Automotive, household appliances, gas, drinking water, food etc.
Materials: Black and colored elastomers, hardness 30 sh. to 90 sh.
Products: O-rings, washers, moulded tubes, bellows, diaphragms, frames, lip seals, grommets, rubber plugs, rubber-to-metal parts, etc., as well as all kinds of contract items for customers.

BENEFITS OF RENEWING THE MACHINE FLEET

- Improved work environment
- Improved parts quality
- Energy savings
- Waste reduction
- Analysis and total traceability of products and processes
- Improved planability of all business processes
- Process data analyses and resulting increase in productivity

other elastomers in all colors are processed. Millions of similar molded parts are produced and analyzed today - even remotely, as all machines at AT Gomma are interlinked and thus provide data in real time. Productivity, production planning and machine parameters are continuously tracked, ensuring maximum quality and traceability.

All in all, these innovations have enabled AT Gomma to significantly expand its market share. In order to meet the constantly increasing order intake, the production area of currently 2000m² will be increased more than two fold this year. For the future, AT Gomma envisions to introduce additional composite products made of rubber-metal or rubber-plastic, which are to be implemented together with MAPLAN. To this end, the passionate team is challenging the status quo: they strive to deliver better quality than others, offer more customization options, deliver on time every time and further increase productivity. This is to be realized with the introduction of new technologies such as cold runner and automation technology from MAPLAN.

"Two MAPLAN machines consume as much energy as one of the old machines with a lower clamping force."

Michele Bortolotti, Commercial and Technical Director





Powered by
STÄUBLI

MAP.mate



HIGHEST PRECISION

SUSTAINABLE & ECONOMIC AUTOMATION

AN ATTRACTIVE, RELIABLE COMPANION FOR EVERY APPLICATION

MAP.MATE 6-AXIS-ROBOT

The MAP.mate 6-axis series fulfils best values in dynamics and flexibility and can be used for a wide range of complex spatial applications. Depending on the model, a MAP.mate moves everything from from small to large components, entire moulds or middle plates with a weight of up to 130 kg. Especially the large working range, coupled with compact design, guarantees maximum flexibility and easy integration - even in limited space conditions. This ensures maximum efficiency of the production cell. The integrated safety functionalities ensure hazard-free human-machine interaction with maximum productivity.

MAPLAN & MAP.MATE ROBOTS

A PERFECT SYMBIOSIS

Who would have thought: Europe has the highest robot density in the world. By the end of 2022, an estimated 4 million industrial robots will be in use around the world. Automation with robots is in vogue because robots are becoming increasingly flexible, cheaper and easier to program. Robots manage to move very small and large parts with high speed and precision. This ensures quality and optimizes production costs at the same time. This way, companies can reduce manual tasks or, ideally, produce around the clock without any personnel. Indispensable in times of scarce staff resources.

This is why MAPLAN is supplementing its automation portfolio with robotic systems for every application as part of its 360° complete system strategy. The two model series MAP.mate and MAP.mate SCARA are not only compact, easy to integrate and fast, but also cover large ranges of tasks.

Typically used for:
Plate handling, machine tending,
demoulding, mould cleaning, spray applications



ULTRA FAST & ECONOMICAL

MAP.MATE SCARA ROBOT

SCARA robots are a popular option for small and medium-sized applications in horizontal space.

The MAP.mate SCARA four-axis robot series with special drive technology enables the shortest cycle times with high repeatability. With a light, rigid structure, the SCARA is highly dynamic and agile. It impresses with precise path accuracy at high drive frequency. The nimble four-axis robots are particularly suitable for tasks that require maximum speed: Loading and unloading, pick & place and many more. Moreover, they are economical: with energy recovery at every axle deceleration and various energy-saving and sleep modes, energy savings of up to 40 % can be achieved.

Typically used for:
Preparation of inserts, sorting of finished parts,
preparation for inspection applications

- HIGH PRECISION
- LONG LIFETIME
- LOW MAINTENANCE
- COMPLETELY INTEGRATED INTO MAPcommander CC
- ENABLES 24/7 PRODUCTION
- INCREASED OUTPUT
- SAFE USE
- ELIMINATION OF STAFF-INTENSIVE TASKS

VIRTUAL DAYS



MAPLAN VIRTUAL DAYS 2021 / 2022

In April, the successful MAPLAN Virtual Days webinar series went into the second phase. Webinar 5 and 6 of the Virtual Days 2022 covered practical topics from day-to-day injection moulding, such as the explanation of helpful MAP.commander functions for injection moulding professionals or how to manage semi- or fully- automated production cells with

only one overall system control. Because of the good response, the webinar series will be continued in 2023. Be part of it! If you have any suggestions for new topics, please e-mail them to experience@maplan.at. Recordings of the webinars that have already taken place are available on YouTube.



SCAN ME!

Enjoy all finished webinars on our youtube channel!



The MAPLAN Webinar Team during the production and broadcast of various webinars.

EXPANSION OF THE PRODUCTION FLOOR AT MAPLAN

MORE ROOM FOR HIGH-TECH PROJECTS

MAPLAN is growing, and not only in the terms of personnel. Due to favorable order status and continuously pleasing order intake MAPLAN has decided to expand its location in Kottlingbrunn/Austria. Standard machines as well as 360° turnkey solutions from MAPLAN are in more demand than ever. In order to be prepared for the future in terms of capacity, the Kottlingbrunn site in Austria will now be expanded. The plan sees the production area increase by 40% and the construction of a new major MAPLAN Tech Center.

The hall extension and the load-bearing capacity of the hall floor were designed for even heavier machines in the planning phase. Large machines, which



The production area at the MAPLAN headquarters in Kottlingbrunn is increased by 40 %, the storage capabilities expanded by an additional storage depot.

have been a challenge in production up to now, can be realized in the new special machines area in the future. This means MAPLAN is also ideally equipped for the current trend in the field of New Mobility - for example, for very large seals for battery boxes installed in electrically powered vehicles. Another new feature is the significantly enlarged MAPLAN Tech Center, where tests for customer projects can be run

on MAPLAN machines, feasibility analyses carried out and compounds tested. Machines, cold runner systems, and tools can be tested, and semi- or fully-automatic production cells with robotics can also be demonstrated.

Completion is planned for September 2022.

MAKE IT EASY

Usability, convenience & performance with MAP.motion! Self-optimizing machine movements make machines faster

Once MAP.motion is activated, the MAP.commander C6 machine control automatically calculates the optimum speed and the correct changeover points for certain movement sequences - such as opening and closing the tool. Depending on the weight of the mold, friction and oil temperature, the best possible acceleration, speed and deceleration are automatically set.

INCREASED COMFORT DURING SET-UP

MAP.commander C6 provides two modes for setting: convenient, automatic calculation by MAP.motion, where only the maximum speed has to be specified, or/and a manual user settings. This means that the machine setter can select automatic mode, adjust partial manual settings or run the machine completely manually, depending on the process requirements. MAP.motion can be used for all ma-

chine movements with path measurement, i.e. closing and opening, ejectors on the injection and closing side as well as freely programmable auxiliary cylinders (MAP.logicmoves).

IDEAL SPEED THANKS TO CONSTANT ANALYSIS AND OPTIMIZATION

When setting the machine, the setter only specifies the maximum speed, as already mentioned. The injection moulding machine independently parameterizes the ramp and reduced speeds during acceleration and braking. Fig. 1 shows a correspondingly calculated and subsequently created profile. This speed profile is permanently analyzed and optimized during the operation. A practical example for illustration: Oil temperature has an effect on the speed. While the oil becomes warmer and more fluid due to prolonged use, the mold closes faster

and in the worst case can be damaged. In this case, MAP.motion ensures that the speed is ideally set for every cycle, regardless of the oil temperature.

AUTOMATICALLY CALCULATED MOVEMENT PROFILES LEAD TO BETTER PERFORMANCE

Comparing manual settings with automatic calculation in practice results in significant time savings per cycle. Example calculation: When using a stroke of 250 mm, the system calculates 1.93 sec for deceleration compared to 2.63 sec for manual setting. The clamping unit and the 2 ejector systems result in 6 strokes. In this example, therefore, the automatic calculation of MAP.motion results in a cycle that is 4.2 seconds faster. MAP.motion is included as standard on every Generation 6 control unit. **Assuming a cycle time of 75 seconds, the time saving is 6%.**



Fig 1: Closing speed settings. Here: Automatic approach of set maximum speed, automated braking until closing speed of 40.0 is reached.



Fig 2: Tool opening and closing curves. Here: Red curve corresponds to automated closing depicted in Fig. 1.

IMPRESSIONS FROM FIP 2022, LYON, FRANCE



Laurent Guillaume, CEO MAPLAN France; Dipl.-Ing. Ralf Sinner, Sales Manager MEWO; Olivier Haure, Technical Sales Manager MAPLAN France.

EVENTS

Save the Dates 2022

05. - 08.05.2022
FIP
Eurexpo Lyon | France

→ APRIL

10. - 13.05.2022
ELMIA Polymer
Jönköping | Sweden

→ MAY

22. - 24.06.2022
Expobor
Sao Paulo | Brasil

→ JUNE

10. - 13.10.2022
ACS / International Elastomer Conference
Knoxville | USA Tennessee

→ OCTOBER

21. - 23.06.2022
SILICONE EXPO
Detroit | USA

27. - 30.06.2022
DKT
Nuremberg | Germany

19. - 26.10.2022
K-2022
Düsseldorf | Germany